SUMMARY OF MAJOR RESULTS

This is a chance to go back through the last several worksheets and track down what you've done. **Throughout, let R be an integral domain.** I would recommend first tracking does all the implications which do hold and only then talk about counterexamples to check that other implications don't.

(83) Draw arrows indicating which implications exist between the following concepts:

R is a PID		Every two elements of R have a GCD

R is Noetherian		R is a UFD

(84) Let I be a nonzero ideal of R. Draw arrows indicating which implications exist between the following concepts:

I is prime		I is maximal

I is of the form (f) for f irreducible		I is of the form (f) for f prime

(85) Suppose that R is a UFD and let I be a nonzero ideal of R. Draw arrows indicating which implications exist between the following concepts:

I is prime		I is maximal

I is of the form (f) for f irreducible		I is of the form (f) for f prime

(86) Suppose that R is a PID and let I be a nonzero ideal of R. Draw arrows indicating which implications exist between the following concepts:

I is prime		I is maximal

I is of the form (f) for f irreducible		I is of the form (f) for f prime